TECHNICAL NOTES

LAKE STATES FOREST EXPERIMENT STATION
UNIVERSITY FARM ST. PAUL, MINNESOTA

When to Pick Pine Cones

Reforestation at the present rate of about 150,000 acres a year in the three Lake States requires yearly collection of 10,000 to 15,000 bushels of pine cones. To get the highest yield of good-quality seed, the cones must be gathered at just the right time. If they are collected too early, much of the seed is not viable; if they are collected too late, much of the best seed has been shed. Therefore, some reliable, easily applied method of determining cone ripeness is needed.

Through studies carried on in lower Michigan during 1938 and 1939, the Lake States Forest Experiment Station has developed such a method. Specific gravity has been found to provide a reliable test of cone ripeness for red pine and white pine, although not for jack pine. Cone color, also, has proved to be a good index of ripeness, although it is much more difficult to define and measure. The following table gives criteria of ripeness for fresh cones of the three Lake States pines:

Species	Specific gravity	Cone color
Red pine	0.85	Deep purple, with brown on scale tips.
White pine	0.92	Yellowish green, with brown on scale tips.
Jack pine	No test	Half or more of cone surface brown.

The specific-gravity test should be applied as follows: (1) Collect at least 5 cones from a tree. (2) Drop the freshly picked cones into the test liquid, kerosene for red pine and linseed oil for white pine. (3) Note how many of the cones float. If a majority float, it is safe to collect from that tree. Care must be taken to test freshly picked cones only; results will be misleading if the cones have had time to dry out even a little.

Since individual trees vary considerably in cone ripeness at a given time, it is best to test several trees separately; however, in a locality where several trees are found to have ripe cones, it is safe to collect from any trees.

The period during which cone collections can best be made usually lasts 20 to 30 days.

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